

Application No.: 10/672554

Case No.: 58753US002

REMARKS

Claims 1-47 are pending. Claims 29-47 have been withdrawn from consideration. Claims 1 and 25 are amended. Support for the recitation in claims 1 and 25 that the compositions are free of additives that competitively absorb actinic radiation is on page 22, lines 1 to 6. Support for the recitation in claims 1 and 25 that a radical is generated upon exposure of the composition to actinic radiation is on page 25, line 19 to page 26, line 22.

Election / Restriction

Applicant affirms the election of Group I, claims 1-28. Claims 29-47 are withdrawn from consideration.

Provisional Double Patenting Rejection

Claims 1-16, 22-24, 29-32, and 34 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17, 21-24, 26-27, 33-38, and 39 of copending Application No. 10/672,762 in view of Shimda et al. (JP 2002-341519). Applicant agrees to address this rejection, if it has not been withdrawn, at the time claims are allowed in the present application.

Claims 1-6, 22-24, and 29-33 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6, 8-10, 2-15, 8, and 20-24 of copending Application No. 10/672,714 in view of Shimda et al. (JP 2002-34519). Applicant agrees to address this rejection, if it has not been withdrawn, at the time claims are allowed in the present application.

Claims 1-16 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 and 21 of copending Application No. 10/847,523 in view of Shimda et al. (JP 2002-34519). Applicant agrees to address this rejection, if it has not been withdrawn, at the time claims are allowed in the present application.

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Rejections based on 35 U.S.C. § 102 /103

Claims 1-7, 4, 17-19, and 21-24 were rejected as anticipated by or, in the alternative, obvious over Shimda et al. (JP 2002-341519, hereinafter "JP '519"). Applicant respectfully submits that the pending claims are not anticipated by or obvious over this reference.

JP '519 provides a polymerization initiator that includes (a) a compound of formula (I) R-SO₂-M⁺ where R is an alkyl or aryl, and M⁺ includes cations chosen from sulfonium, iodonium, diazonium, ammonium, and horse mackerel NIUMU; and (b) a light-and-heat conversion agent. The light-and-heat conversion agent absorbs light resulting in the generation of heat. The heat then causes the decomposition of the compound of formula (I) resulting in the formation of a radical that can initiate the polymerization reaction.

The light-and-heat conversion agents are generally dyes or pigments that absorb actinic radiation. Reference JP '519 does not teach or suggest that the compound of formula (I), which can have an aryl sulfinate anion and a sulfonium cation, functions as a polymerization initiator in the absence of a light-and-heat conversion agent. Thus, this reference does not teach or suggest a composition that is free of an additive that competitively absorbs actinic radiation as recited in the pending independent claims. This reference does not teach or suggest that a composition that can generate a radical upon exposure of actinic radiation in the absence of an additive such as a dye or pigment.

Applicant respectfully requests withdrawal the lack of novelty or, in the alternative, the obviousness rejection based on JP '519.

Rejections based on 35 U.S.C. § 103

Claims 11-13 and 15-16 were rejected as being obvious over JP '519 in view of JP 09-344110 (hereinafter "JP '110"). Applicant respectfully submits that the pending claims are not obvious over this reference.

As discussed above, the pending claims are not obvious over JP '519. JP '110 does not remove the deficiencies of JP '519. Rather, like JP '519, reference JP '110 discloses the use of a light-and-heat sensing element in combination with the radical generating element. There is no teaching or suggestion that the radical generating element, which can include a sulfonium ion, can be used to initiate polymerization reactions in the absence of the light-and-heat sensing

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element. The combination of references teach that an added dye or pigment absorbs actinic radiation to generate heat that caused the decomposition of the radical generating element. The radical generating element does not form a radical in the absence of heat or in the absence of a dye or pigment.

The combination of JP '110 and JP '519 do not teach or suggest a composition that is free of an additive (e.g., dye or pigment) that competitively absorbs actinic radiation. This reference does not teach or suggest that a composition that can generate a radical upon exposure of actinic radiation in the absence of an additive such as a dye or pigment. Applicant respectfully requests withdrawal of the obviousness rejections based on the combination of these references.

Claims 1-5, 11, 14, 17-19, and 21-24 were rejected as being obvious over Kawashima et al. (US 5,486,544 hereinafter "US '544") in view of JP '519. Applicant respectfully submits that the pending claims are not obvious over this reference.

US '544 discloses polymerizable compositions that include an arylsulfinate salt. As noted by the Examiner, there is no teaching of a triarylsulfonium salt in this reference. Although JP '519 teaches the combination of an arylsulfinate ion and a triarylsulfonium ion, the combination of references teaches that a dye or pigment would be needed to form an initiating radical upon exposure to actinic radiation. That is, there is no teaching or suggestion that a radical could be generated upon exposure to actinic radiation in the absence of an additive such as a dye or pigment that is capable of adsorbing the actinic radiation as recited in the pending claims.

Applicant respectfully requests withdrawal of the rejection based on the combination of US '544 and JP '519.

Rejections based on 35 U.S.C. § 102

Claims 25-28 are rejected as being anticipated by JP '519. Applicant respectfully submits that the pending claims are novel over this reference.

As discussed above, the pending independent claims recite that the composition is free of an additive (e.g., a dye or pigment) that competitively absorbs actinic radiation. In contrast, JP '519 discloses the use of a light-and-heat conversion agent that absorbs radiation. The absorbed

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radiation heats the sample resulting in the formation of a radical that functions to initiate polymerization. Thus, JP '519 does not teach all the limitations of the independent claims. There is no teaching that a radical could be generated upon exposure to actinic radiation in the absence of an additive such as a dye or pigment that is capable of adsorbing the actinic radiation.

Applicant respectfully requests withdrawal of the rejections based on JP '519.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested. Allowance of claims 1-28, as amended, at an early date is solicited.

Respectfully submitted,

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Date

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